AusNet Gas Services Pty Ltd

Reset Regulatory Information Notice

Basis of Preparation

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AusNet Gas Services Pty Ltd
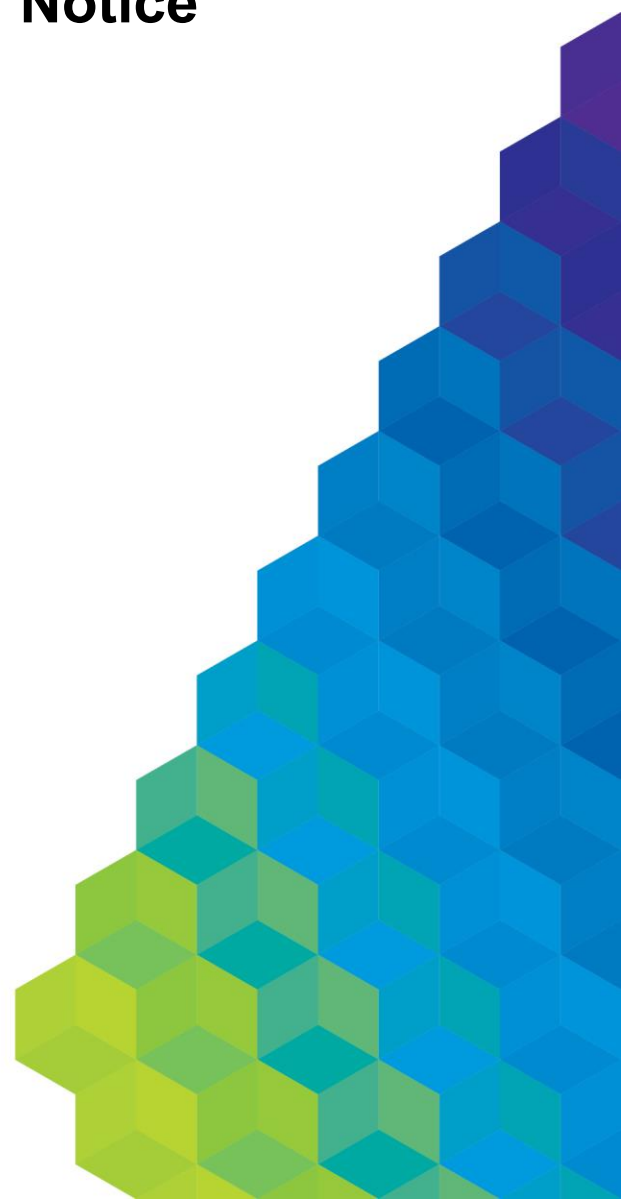
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Overview

This Basis of Preparation document supports the preparation and reporting of the information reported in the AusNet Gas Services Pty Ltd's ("AusNet Gas Services" or the "Company") report entitled 'AusNet Gas Services GAAR 2018-22 Regulatory Templates - Consolidated' ("the Report").

The ultimate Australian parent entity of the Company is AusNet Services Ltd ("AusNet Services"), a company incorporated in Australia.

The Report has been prepared in accordance with the 'Regulatory Information Notice issued under section Division 4 of Part 1 of Chapter 2 of the *National Gas (Victoria) Law'* ("RIN") issued by the AER on 28 October 2016.

AusNet Gas Services' 2015 Regulatory Year is the period 1 January 2015 to 31 December 2015 ("Regulatory Year"). Data included in the Report has been provided for the historic and forecast Regulatory Years as specified in the Report. All financial data included in the Report is presented in whole Australian dollars, unless otherwise stated. Non-financial data is stated as per the measures specified in the Report.

AusNet Services' owns and operates 3 regulated networks – an electricity distribution network, a gas distribution network, and an electricity transmission network. Employees of AusNet Services work across the 3 regulated networks and there are shared costs and overhead and other corporate costs that cannot be directly allocated to a particular network. These costs are proportioned amongst AusNet Services' 3 regulated networks, as well as unregulated businesses, based on a monthly Activity Based Costing ("ABC") survey process completed by all cost centre managers and in accordance with AusNet Services' Cost Allocation Methodology ("CAM").

Materiality has been applied throughout the Report and Basis of Preparation. Materiality is defined as information that if omitted, misstated or not disclosed has the potential, individually or collectively to influence the economic decisions of users.

In conformity with AER requirements, the preparation of the Report requires the use of certain critical management estimates. For the purpose of preparing the Report, 'estimated information' is defined as information presented in the Report whose presentation is not materially dependent on information recorded in accounting records or other records used in the normal course of business, and whose presentation for the purpose of the RIN is contingent on judgments and assumptions for which there are valid alternatives, which could lead to a materially different presentation in the Report.

Where estimated information has been presented, the circumstances and the basis for the estimate, including the approach used and assumptions made have been set out below. Estimates will often not equal the related actual results and estimates have only been made for the purpose of disclosing the information requested. Considerations of the cost and efficiency of preparation as well as the reliability and accuracy of data available have been taken into account in determining the best methodology to determine the estimates.

'Actual Information' is defined as information materially dependent on information recorded in historical accounting records or other records used in the normal course of business, and whose presentation is not contingent on judgments and assumptions for which there are valid alternatives, which could lead to a materially different presentation. Any information or allocation which has been calculated via the ABC survey process is considered actual information, as this is in accordance with the AER-approved CAM.

The preparation methodologies and information sources adopted in the preparation of the Report is set out below.

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1   CPI Escalation

Table 1.1 - CPI (actual/estimated)

Preparation Methodology:

Historic

The CPI Escalation table has been completed using actual CPI data sourced from the Australian Bureau of Statistics for the December 2015 quarter (8 cities), together with forecast inflation data sourced from AusNet Services' GAAR Proposal 2018-22.

Forecast

Forecast annual inflation of 1.65% is used an estimate for periods Dec-16 through Dec-20 consistent with the inflation assumption used in AusNet Services' GAAR Proposal 2018-22.

Table 1.2 - CPI p.a.

Information reported is linked to Table 1.1.

2   Escalators

Table 2.1 - Real Cost Escalators

Preparation Methodology:

Template 2.1 has been populated with escalating factors from the perspective of the next Access Arrangement. On this basis, 2013-15 metrics have been left blank.

Forecast

The forecasting method for each of the components is summarised below.

Price component	Overview of forecasting methodology
Labour (i.e. external and internal)	An average of forecast changes in the Victorian Wage Price Index for electricity, gas, water and waste services, using forecasts from consultants Deloitte Access Economics (DAE) and BIS Shrapnel.
Non-labour (e.g. materials)	AusNet Services assumes that non-labour prices will grow in line with the CPI. This approach is consistent with recent AER determinations and is considered reasonable in the current circumstances.

For the purpose of this access arrangement proposal, AusNet Services proposes to adopt an average of the forecasts provided by consultants DAE and BIS Shrapnel for both external and internal labour.

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The table below shows the BIS Shrapnel forecast of real changes in Victorian wage price index (WPI) for the Electricity, Gas, Water and Waste Services (EGWWS) industry over the next access arrangement period and the same forecasts prepared by Deloitte Access Economics as (part of the AER's Draft Decision for AusNet Services' Transmission Revenue Reset).

Labour cost escalation rate (EGWWS)	2018	2019	2020	2021	2022
BIS Shrapnel (June 2016)	1.11%	0.94%	1.16%	1.66%	1.98%
Deloitte Access Economics (Feb 2016)	0.50%	0.90%	1.10%	1.10%	1.10%
Proposed real labour cost escalation rate (average)	0.80%	0.92%	1.13%	1.38%	1.54%

Table 2.2 – Input / Cost Mix (Weights)

Preparation Methodology:

Data reported for the Input/Cost Mix is based on weights sourced from historic regulatory accounts. The 2015 actual weights have been extrapolated for future years.

4 Connections market expansion

Table 4.1 – New Customer Connections

Table 4.1.1 Number of new customer connections

Preparation Methodology:

Historic

Historic customer numbers are based on the Centre of International Economics (CIE) report and are consistent with Template 27- Customer Numbers.

There was no available data for "Electricity to gas" therefore connections were assumed as zero. 'New Homes' to 'Medium Density/High Rise' were split based on actuals, and forecast based at 25.5% consistent with CIE forecasting. The I&C Tariff was assumed to be I&C Tariff V connections. I&C contract was assumed to be Tariff D & M.

Forecast

Forecast customer numbers is based on the CIE forecasting report. Customer numbers and expenditure was sourced from previously approved Capex Models.

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Table 4.1.2 Volume of Mains/Services/meters per connection

Preparation Methodology:

Historic & Forecast

2012-15: Data calculated based on a one-to-one ratio for all components of connection, consistent with Annual Regulatory Accounts data for unit rate calculations.

Table 4.2 - New Customer Connection Expenditure

Table 4.2.1 Unit Rates Mains/Services/meters

Preparation Methodology:

Historic & Forecast

2008-15: Residential unit rates for 'New Homes' and 'Medium Density/High Rise' were assumed to have same unit rate. 'I&C Tariff' and 'I&C Contract' were also assumed to have the same unit rate. Total expenditure was sourced from Annual Regulatory Accounts. It is noted that due to the assumed splits, I&C contract has a negative value, due to the assigned contributions.

Contributions were assumed at 52% of total contribution from the Annual Regulatory Accounts. For historical contributions, 90% was assigned to I&C tarrif V, and 10% of I&C contract.

2016-22: Forecast expenditure was sourced from the Capex Model 2018-2022.

The reported expenditure was based on average historic asset category expenditure from annual regulatory RINs for residential and Industrial & Commercial connections.

Approved Expenditure was sourced from the approved Capex Model.

Unit rates reported are exclusive of overheads (direct costs only).

Table 4.2.2-4.2.6 Customer Connection Expenditure

Preparation Methodology:

Historic & Forecast

Expenditure was calculated as the number of Customer Connections multiplied by the unit rate from the Annual Regulatory Accounts (capital expenditure category).

Table 4.2.2-4.2.6 Total New Customer Connection expenditure

Historic & Forecast

Information reported is linked to tables above.

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Table 4.3 – Customer Contributions

Preparation Methodology:

Historic & Forecast

Customer contributions are only assumed for I&C customers. Historic contributions were calculated at 52% of total contributions. Contribution split between I&C Tariff V for historic is based on 90% split for I&C tarrif and 10% for I&C contract. Customer numbers are consistent with the CIE report.

5   Mains Augmentation

Table 5.1 - Mains augmentation expenditure

Table 5.1 – Mains augmentation expenditure (actual/forecast)

Preparation Methodology

Historic

2008-2012: Data sourced from Annual Regulatory Accounts. Data reported is not split by project which is consistent with the historic Annual Regulatory Accounts.

2013-2014: Data sourced from the TM1 system at a Capex project level for all projects under the Augmentation work code. Capex by project is reported in the year of closure.

2015-16: Data sourced from the SAP system at a Capex project level for all projects under the Augmentation work code.

Forecast

Data was sourced from the Capex Model forecasts in real December $2017.

Table 5.2 – Mains augmentation expenditure (approved)

Data reported was sourced from the approved Capex Models for each of the regulatory periods.

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6   Mains Replacement

Table 6.1 - Mains replacement expenditure

Table 6.1.1 - Proactive mains replacement expenditure

Preparation Methodology:

Historic

2013-15: Data sourced from the Annual Regulatory Accounts. The projects reported are projects which were financially closed in the respective calendar years. The length in meters is based on scope length. Actual length laid may differ from this length; however, any difference are not expected to be material in nature. This is considered Management's best estimate based on available data as it has been analysed by a subject matter expert ("SME").

Forecast

The forecast length and expenditure is based on the 2018-2022 Capex Model.

Table 6.1.2 - Ad hoc/reactive mains replacement

Preparation Methodology:

Historic

2013-15: Data sourced from the Annual Regulatory Accounts.

Forecast

2016-22: Forecast information is based on the 2018-2022 Capex Model.

Table 6.1.3 - Total Mains replacement

Preparation Methodology:

Historic & Forecast

Table 6.1.3 is linked to Tables 6.1.1 and 6.1.2.

7   Telemetry Capital Expenditure

Table 7.1 - Telemetry expenditure

<u>Preparation Methodology</u>:

Historic

2008-12: Data sourced from the Annual Regulatory Accounts. Data reported is not split by project which is consistent with the historic Annual Regulatory Accounts.

2013-14: Data sourced from the TM1 system at a Capex project level for all projects under the SCADA work code. Capex by project is reported in the year of closure.

2015-16 years: Data sourced from the SAP system at a Capex project level for all projects under the Augmentation work code.

Forecast

Data sourced from the Capex Model forecasts in real December $2017.

Table 7.2 - Telemetry expenditure (approved)

<u>Preparation Methodology</u>:

Historic & Forecast

Data sourced from the approved Capex Models for each of the regulatory periods.

8   Meter Replacement

Meter replacement refers to the replacement of installed meters with new or refurbished meters in accordance with requirements outlined within the Gas Distribution System Code.

Capital expenditure reported in Table 8 is exclusive of capex overheads, and includes any profit margins or management fees paid directly to related party contractors, unless stated otherwise.

Table 8.1: Number of meters removed (actual/forecast)

- • 'Refurbishable meters' refers to meters removed from the field that are returned to a meter manufacturer for refurbishment.
- • 'Meters decommissioned' refers to meters removed from the field that are scrapped and disposed of; i.e. cannot be refurbished.

<u>Volume of meters removed - Actual (2008-2016)</u>

The volume of meters removed between 2008 and 2016 was estimated from AusNet Services' meter asset repository – Hansen Hub.

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A *Meter Install Report* was analysed by a Subject Matter Expert (SME) to determine the volume of meters installed in the network by type (i.e. residential or commercial and industrial) and reason (i.e. new connection or meter replacement) per calendar year. The volume of meters installed in the network for meter replacement was then taken as a proxy for the number of meters removed.

AusNet Services' asset database does not distinguish between a 'new' or 'refurbished' meter when installing a meter; either for a new installation or the replacement of an existing asset. *Master Meter Test Reports* were used to estimate the proportion of meters that were refurbished or installed as new.

When a meter (new or refurbished) is received from a supplier, it comes with an individual meter test result. Each individual test result identifies whether a meter was refurbished or not, and this data is contained in the Master Test Report. The *Master Meter Test Report* for each calendar year was analysed by an SME to determine proportion of new and refurbished meters installed. These weightings were then applied to total volumes for the respective year.

Volume of meters removed – Forecast (2017-2022)

Forecast replacement volumes were estimated at the individual program level (listed in Table 8.4), based on historic failure trends of meter types and current strategies for asset replacement.

All domestic meter replacements will see only new meters installed for replacement. This is in accordance with a new asset strategy, introduced during 2016, to discontinue the refurbishment of domestic meters. It was estimated that 80% of I&C meters will be refurbished, and the remaining 20% purchased as new. This estimate is based on purchasing trends in recent years.

Table 8.2 and 8.3: Meter replacement expenditure (actual/forecast)

This expenditure is inclusive of meter costs, warehousing, internal labour and installation costs.

Actual Expenditure (2008-2016)

Direct meter replacement expenditure was sourced from the Annual Regulatory Accounts. Discrete figures for domestic and I&C expenditure was sourced from the Annual Regulatory Accounts. The direct expenditure is considered actual and no estimates were required.

Overhead expenditure was estimated as 7% of the Direct Expenditure. This is based on forecast overhead allowance for 2017-2022 meter replacement expenditure.

Forecast Expenditure (2017-2022)

Forecast expenditure for meter replacement was estimated using a bottom-up methodology for each program type as outlined in Table 8.4. Forecast expenditure is aligned to forecast replacement volumes, meter types and year of replacement type. Forecast expenditure includes:

- • Internal Labour: AusNet Services and Select Solutions project management costs.
- • External Labour (Contractors): Physical replacement of meter, logistics and transportation and labour component of additional works resulting from meter replacements (i.e. after hours refix relight, meter relocations)

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- •   Materials: Meter costs (refurbished or new) combined with material component of additional works resulting from meter replacements (i.e. new fittings).

Table 8.4: Meter replacement expenditure by category/project (approved)

Preparation Methodology:

Historic & Forecast

Data sourced from the approved Capex Models for each of the regulatory periods.

Table 8.5: Meter replacement expenditure by meter type (actual/forecast)

The allocation of cost for meter replacement, by individual meter type, was estimated. AusNet Services' financial systems do not capture this level of detail. An assessment of total expenditure and replacement volumes has been performed by an SME to derive an annual unit cost for each of the following:

- -   Domestic meter replacement with 'new' meter
- -   Domestic meter replacement with 'refurbished' meter
- -   I&C meter replacement with 'new' meter
- -   I&C meter replacement with 'refurbished' meter

Each unit cost was then multiplied by respective volumes for that year to determine the expenditure at the meter type level.

This approach is considered the best estimate based on available data, despite unit costs by meter type varying further across the 60 brands and sizes. The variation across each of the 60 meter types was not estimated, as the additional time to carry out this analysis was not believed to materially impact the accuracy of dated contained within Table 8.5.

Table 8.6: Other meter replacement expenditure (actual/forecast)

No other expenditure is incurred. All expenditure is contained within Tables 8.2-8.5.

Table 8.7: Meter family expected lives in December 2017 (actual)

Volumes within Table 8.7 are for meter families expected to be tested **and** failed within the 2018-2022 period. Volumes do not include meters that will be tested and granted life extensions beyond 2022.

Forecasts have been carried out by an SME and take into account installation date (from Asset Database Hansen), minimum compliance periods (as per Distribution Code and other standards), trends in field life extension and failure rates for the respective meter families.

Table 8.8: In service compliance testing results and Table 8.9: Meter removals

Data contained within Tables 8.8 and 8.9 was sourced from annual in-service compliance testing results issued to the AER for review and approval. This data is considered to be accurate at the time of preparation, and no estimates were required.

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In-service compliance test results for 2017 are not yet available as they are typically received during Jan-March of the respective calendar year. As such, the 2017 column was left blank.

9   Other Capital Expenditure

Table 9.1 - Other capital expenditure (actual / forecast)

Preparation Methodology:

Historic

Individual project Capex was reported in the year of closure.

2008-15: Data sourced from Annual Regulatory Accounts. Capex data at a project level was not readily available.

Forecast

2016-22: Data sourced from the Capex Model forecasts in real December $2017.

Table 9.2 - Other capital expenditure (approved)

Preparation Methodology:

Historic & Forecast

Data sourced from the approved Capex Models for each of the regulatory periods.

12   IT Capital Expenditure

Table 12.1 – Capital Expenditure

Preparation Methodology:

Historic

Actual direct costs for each IT domain were sourced from AusNet Services' Financial System using the information reported in the Annual Regulatory Accounts. Actual overhead costs were calculated by determining annual overhead rates based on the total direct IT Capex and total capitalised IT overheads reported in the Regulatory Accounts, and applying these overhead rates to each domain's direct costs.

Forecast

Forecast direct costs by domain were forecast using the cost estimation methodology set out in AusNet Services' Technology Strategy.

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Forecast overheads were calculated by applying the forecast IT Capex overhead rates calculated in the Capex Model to each domain's direct Capex. The method used to determine forecast IT Capex overhead rates as described in section 14 Overheads.

Forecast cost escalation Capex, which has been entered as a new row, reflects the part of the gross IT Capex forecast that is attributable to labour and materials escalation, as calculated in the Capex Model.

Table 12.2 - IT Capex (approved)

Preparation Methodology:

Approved direct IT Capex amounts reflect the allowances approved in the ESC's Final Decision (p.372) for the 2008-12 period and the AER's Final Determination for the 2013-17 period.

2008-12: IT capitalised overheads reflect the approved IT overhead rate in the ESC's Final Decision (p.413) multiplied by the approved direct IT Capex.

2013-17: IT capitalised overheads reflect the amounts approved in the AER's Final Determination for IT capitalised overheads.

All amounts have been converted to real December 2017$ using lagged September Quarter CPI.

14   Overheads

Table 14 – Capitalised Overheads Expenditure

Table 14.1 – Total overhead expenditure (actual/forecast)

Overhead Expenditure is expenditure that cannot be directly attributed to a work activity, project or work order and consists of labour, materials, contract costs and other costs.

Overhead Expenditure has been disaggregated as Network Overheads and Corporate Overheads.

Table 14.1.1 – Network Overhead Expenditure
Network Overhead costs refer to the provision of management services and other related operational, network planning, asset management and compliance functions that cannot be directly associated with any specific operational activity (such as transmission pipelines maintenance, cathodic protection, etc.).

Network Overhead includes Network operating costs, Customer connections, Billing and revenue collection and Advertising and marketing. These expenditure categories are defined below:

- Operating costs – derived using direct allocation from General Ledger accounts GSL payments, Energy Safe Victoria levy and expenditure derived using ABC survey results.

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- Customer Connections – derived using ABC survey results (where each cost centre has been assigned a prescribed Regulatory Category – or split across Regulatory Categories – based on the nature of the cost centre's costs).
- Billing and Revenue Collection – derived using ABC survey results (where each cost centre has been assigned a prescribed Regulatory Category – or split across Regulatory Categories – based on the nature of the cost centre's costs).
- Advertising and Marketing – derived using ABC survey results.

Capitalised overhead is overhead expenditure recognised as part of the cost of an asset, i.e. as capital expenditure

Preparation Methodology:

Historic

Data sourced from the Annual Regulatory Accounts. Information was extracted from the Financial Systems. Using a combination of work code, general ledger account information, cost ledger code and division, a suitable subject matter expert analysed and classified the data in the relevant template categories.

Forecast

Forecast network overheads were derived for each category by multiplying total forecast overheads by that category's proportion of total actual overheads in 2015.

Network overhead expenditure is reported in Table 14.1.1 on a gross basis, before capitalisation.

Table 14.1.2 – Corporate Overhead Expenditure

Corporate Overhead Expenditure refers to the provision of corporate support and management services by the corporate office that cannot be directly identified with specific operational activity. Corporate overhead costs include those for executive management, legal and secretariat, human resources, finance, Non-network IT support costs and regulatory costs.

Preparation Methodology:

Historic

Data sourced from the Annual Regulatory Accounts. Information was extracted from the Financial Systems. Using a combination of cost ledger code and division, a suitable subject matter expert analysed and classified the data in the relevant template categories.

Forecast

Forecast corporate overheads were derived for each category by apportioning total forecast 2016-22 overheads by that category's proportion of total actual overheads in 2015. Corporate overhead expenditure is reported in Table 14.1.1 on a gross basis, before capitalisation.

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Table 14.2 - Capex/Opex overhead apportionment (actual/forecast)

AusNet Services capitalises Overhead expenditure that is directly attributable to bringing an asset to its intended in-service state. Indirect costs (to bring the asset to its intended in-service state) include labour costs of employees who do not complete timesheets. The amount of capitalised overheads was allocated to the prescribed categories based on the ABC Survey process undertaken in accordance with the CAM.

Preparation Methodology:

Historic

Opex overheads in Table 14.2 represent the total of network overhead expenditure in Table 14.1.1 plus corporate overhead expenditure in Table 14.1.2 less capitalised overheads amount.

Forecast

Opex overheads were derived by calculating Opex overheads as a percentage of total Opex in 2015, and multiplying this percentage by the total Opex forecast from 2016-22.

Capitalised overheads have been forecast by determining fixed capitalised overheads amounts for network and IT Capex based on the average overheads it incurred from 2013-16. These amounts have been converted into network and IT overhead rates using the forecasts of network and IT Capex, which have then been applied to the respective direct Capex forecasts.

Total overheads is the sum of Opex and capitalised overheads.

Amounts capitalised have been separately presented under 'Capitalised Overheads' in Table 14.2.

Table 14.3 - Capex overhead rates (actual/forecast)

Historic

The overhead rate reflects actual capitalised overheads as a percentage of total direct Capex, as per the Template 16 Capex Allocation.

Capitalised overheads were allocated into Asset Categories on a pro rata basis using Capex data from Template 16 Capex Allocation.

Forecast

The forecast overhead rate reflects forecast capitalised overheads as a percentage of total direct Capex, as per the Capex Model. Forecast capitalised overheads were derived for each category by multiplying total forecast capitalised overheads by that category's proportion of actual capitalised overheads in 2015, excluding IT overheads, which reflect the IT overheads forecast calculated in the Capex Model (as described above in relation to Table 14.2).

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Table 14.4 - Capex overhead rates (approved)

2013-17: Overhead rates and total overheads reflect amounts approved in the AER's Final Decision, modified for AusNet Services' 2016 low pressure mains replacement cost pass through application and the Energy for the Regions gas extensions program.

15   Related Party Transactions

For the purpose of completing Template 15 Related Party Transactions, a 'Related Party Contract' is defined as a finalised contract between AusNet Gas Services and a Related Party for the provision of goods and/or services. A Related Party is defined within the Regulatory Information Notice instructions.

Table 15.1 Payments made by AusNet (Gas) to Related Party greater than $1,000,000

Preparation Methodology:

Historic

Related Party Costs (both Opex and Capex) sourced from the Annual Regulatory Accounts. Using the workings to the Annual Regulatory Accounts, Related Party Capex was allocated into the Capex categories required by a SME. The allocation was based on the nature of the expenses and the counterparty.

Forecast

It has been assumed that there will be no payments made to a Related Party which are greater than $1,000,000 in 2016 – 2022. This is consistent with 2015, the most recent Regulatory Year.

Table 15.2 Payments received by AusNet (Gas) from Related Party greater than $1,000,000

Preparation Methodology:

Historic

Data sourced from the Annual Regulatory Accounts. There were no payments received by AusNet Gas from Related Parties that were greater than the prescribed threshold.

Forecast

It has been assumed that there will be no payments received from a Related Party which are greater than $1,000,000 in 2016 – 2022. This is consistent with historical data.

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Table 15.3 - Related party margin (actual/forecast)

Preparation Methodology:

Historic

Related Party Margins have been determined based on an analysis of contracts currently in place with Related Parties. Related Party margin information was available in relation to transactions with Jemena Asset Management Pty Ltd ("JAM"). Based on the JAM contractual arrangement, the related party margin is 6% of the contract costs.

In relation to CLM Infrastructure Pty Ltd ("CLM"), the related party margin was unavailable as the contract was on an arm's length basis. AusNet Services was not privy to margin information.

In relation to SPIMS and EBS, there were no related party margins.

Forecast

It has been assumed that there will be no payments made to a Related Party which are greater than $1,000,000 in 2016–2022. Based on this, it is assumed that there are no forecast related party margins.

Table 15.4 - Related Party Margin (approved)

Preparation Methodology:

Historic & Forecast

Table 15.4 has not been completed as the required data was not separately specified in previous Access Arrangements.

Table 15.5 - Per cent of Capex outsourced to related party (actual/forecast)

Preparation Methodology:

Historic & Forecast

The data reported is calculated as the Capex in Table 15.8 divided by Gross Capex per the Annual Regulatory Accounts.

Table 15.6 - Per cent of Capex outsourced to related party (approved)

Preparation Methodology:

Historic & Forecast

Table 15.6 has not been completed as the required data was not separately specified in previous Access Arrangements.

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Table 15.7 - Capex outsourced to related party (actual)

Preparation Methodology:

Historic

Capex outsourced to a related party was determined using data extracted from the Financial Systems.

Forecast

It has been assumed that there will be no payments made to a Related Party which are greater than $1,000,000 in 2016 – 2022. Based on this, there is no Capex outsourced to a related party.

Table 15.8 - Capex outsourced to related party (approved)

Preparation Methodology:

Historic & Forecast

Table 15.8 has not been completed as the required data was not separately specified in previous Access Arrangements.

16   Capex Allocation

Table 16.1.1-11

Preparation Methodology:

Historic

2008-11: Data sourced from the AER's Final Decision Capex Model for 2013-2017. To source data in the requisite Capex categories, percentage splits were applied based on capital expenditure reported in the historic Annual Regulatory Accounts.

2012-15: Data sourced from the Annual Regulatory Accounts and supporting workings.

2008-2012: When reconciling the individual Capex Templates 4 to 12 and Template 29.1) to Template 16, the following is noted –

- Amounts reported in Template 7 Telemetry should be removed, to prevent double counting
- Gas Extension Capex is not required to be reported in Template 29.1 for 2008 to 2012. Based on this, $6.1M in 2008 and $4.4M in 2009 is not shown in Template 29.1.1 to Template 29.1.4. This needs to be included in order to the individual Capex Templates to reconcile to Template 16.
- For 2008-2012, the remaining differences are considered not material.

2013-2015: The individual Capex templates (within the GAAR Reset RIN) will not reconcile to Template 16 as the individual Capex templates are prepared on a project complete basis, not a Capex incurred basis.

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Forecast

Data reported in the forecast Capex Allocation based on the 2018-2022 Capex Model.

17 Gross Capex

Table 17.1 Gross Capex including RPM

Preparation Methodology:

Historic

2008-15: Data sourced from the Annual Regulatory Accounts and supporting workings. Data reported represents direct costs plus overheads.

Forecast

The forecast data sourced from the forecast Capex Model.

Table 17.2 Gross Capex including RPM (approved)

Preparation Methodology:

Historic and Forecast

The approved Gross Capex was sourced from the GAAR approved GAS RAB Rolling Forward template for 2008 to 2012 and the Final Decision Capex Model for 2013-2017.

Table 17.3 Gross Capex excluding RPM

Preparation Methodology:

Historic

2008-15: Data sourced from the Annual Regulatory Accounts and supporting workings. The Related Party Margin excluded is consistent with information reported in Template 15. Data reported represents direct costs plus overheads.

Forecast

Consistent with Template 15 Related Party Transactions it has been assumed that there is no forecast Related Party Margin.

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Table 17.4 Gross Capex excluding RPM (approved)

Preparation Methodology:

Historic

2008-12: The approved Gross Capex was sourced from the GAAR approved GAS RAB Rolling Forward Template

2013-17: Data sourced from the AER's Final Decision Capex Model for 2013-2017.

Forecast

Consistent with Template 15 Related Party Transactions it has been assumed that there is no forecast Related Party Margin.

20   Changes in Provisions

Provisions are recognised when AusNet Gas Services has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation, and the amount of the provision can be measured reliably. Provisions are not recognised for future operating losses.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the relevant reporting date, taking into account the risks and uncertainties surrounding the obligations. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

Financial information on provisions for Haulage reference services has been reported in accordance with the requirements of the CAM.

Data has not been provided for the 2016 and 2017 years as Provisions have not been forecast.

Table 20.1.1 - Total Provisions

Preparation Methodology:

Historic

Table 20.1.1 is a summation of Table 20.2.

Table 20.1.2 - Allocation of movement in total provisions

Preparation Methodology:

Historic

Table 20.1.2 is a summation of Table 20.2.

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Table 20.1.3 - Allocation of movements in provisions for Capex

Preparation Methodology:

Historic

Information reported was extracted from the Annual Regulatory Accounts. In the Annual Regulatory Accounts, the net movement in provisions allocated to Capex (per Template 20.1.2) was pro-rated across the regulatory asset classes in proportion to the Capex reported in each asset class.

All information is considered estimated information as the Financial Systems do not capture provisions in separate Capex and Opex components and also in regulatory asset classes. The data provided is considered to be Management's best estimate based on information available.

Table 20.2 - Changes in provisions by provision incl. RPM

Provisions have been separately presented based on the nature of the provision and allocated between an Opex component and a Capex component based on the classification of the underlying cost associated with the provision.

The 'Increase /decrease in provision charged to Opex' and the 'Increase /decrease in provision charged to Capex' includes any write backs.

Preparation Methodology:

Historic

Provision for Doubtful Debts, Uninsured Losses Provision, Environmental Provision, Miscellaneous Provision, Corporate Restructuring Provision

Using the information from the underlying workings to the relevant Special Purpose Financial Reports ("SPFRs"), amounts were allocated into Ancillary Reference Services and Haulage Reference Services based on appropriate drivers given the nature of expense. The data presented is the summation of Ancillary Reference Services and Haulage Reference Services. Information disclosed in relation to the above provisions is considered 'actual information'.

Provision for Employee Entitlements and Provision for Superannuation

Data sourced from Financial Systems and allocated into Ancillary Reference Services and Haulage Reference Services based on headcount drivers sourced from the ABC surveys. The data presented is the summation of Ancillary Reference Services and Haulage Reference Services

The total 'Liabilities paid from provisions' and 'Increase/decrease in provision' are considered 'actual information' as the data was extracted from the Financial Systems.

The 'Other adjustments' amount for Superannuation relates to Defined Benefit Actuarial adjustments. As this is recognised against retained profits, it has been separately shown.

All other information disclosed under Provision - Superannuation and Provision - Employee Entitlements is considered 'estimated information' due to the preparation approach outlined below. To derive the

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estimates, information was sourced from the Financial Systems and supplemented with internal allocation models based on ABC surveys.

In relation to Provision for Employee Entitlements and Provision for Superannuation, the split between the Opex component and the Capex component was estimated. This was required as this data is not separately captured in the Financial Systems. To determine the proportion of these provisions that should be classified as Capex, AusNet Gas Services has used the results from AusNet Services' capitalised overhead model which calculates the proportion of labour costs to be capitalised. The capitalised overhead model uses results from the ABC surveys which provide the percentage split of management effort between all of AusNet Services' regulated and unregulated networks as well as between Opex and Capex. This is considered Management's best estimate based on the data available.

21 Indicative bill impacts

Table 21.1 - Table 21.3 Typical gas bill

Preparation Methodology:

Typical gas bill information for residential and non-residential customers is sourced from AusNet Services' Proposal Post Tax Revenue Model (PTRM).

Forecast inflation and X factors are also sourced from AusNet Services' Proposal PTRM.

Estimated Information:

For the purposes of Table 21.1, the estimated proportion of a typical customer's bill relating to Distribution costs is 33%, being approximately a third of an average residential customer's gas bill as stated by the AER when 2015 gas network tariffs have been approved.[1]

Table 21.4 - Table 21.6 Distribution bill component

Information reported is linked to the tables above.

22 WACC Inputs

Table 22.1 – Table 22.5

Preparation methodology:

Forecast

The inputs to calculate the weighted average cost of capital align with the inputs used in AusNet Services' Revenue Proposal PTRM model. For the purposes of Table 22.2, AusNet Services' adopts a benchmark credit rating of BBB+ in line with the AER's Rate of Return Guideline. The formulas for updating debt in each year of the regulatory control period are provided in Table 22.2.

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[1]   https://www.aer.gov.au/communication/the-aer-approves-the-2015-victorian-gas-network-tariffs

Basis of Preparation

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The following variables are used in the formulae:-

- kd_t is the return on debt for Regulatory Year t of the Regulatory Period;

- T_{20XX} is the cost of debt that feeds into the calculation of kd_t and is not yet matured in 20XX; and

- R_t is the annual return on debt observation for each year t of the regulatory periods (other than 2018) calculated according to the methodology set out in Chapter 9 of AusNet Services' Proposal (Rate of Return and Corporate Tax).

The Debt and Equity raising expenditures contained in Table 22.4 are expressed in millions, real Dec $2017, as sourced from AusNet Services' Revenue Proposal PTRM model inputs. Expenditures are provided for the total regulatory period.

The methodology used to estimate the value of inflation and the risk free rate are described in AusNet Services' 2018-22 GAAR Proposal Rate of Return and Corporate Tax Chapter.

23.1 Opex inc. RPM

Table 23.1.1: Operating expenditure (including RPM)

Preparation Methodology:

Historic
2008-15: Data sourced from the Annual Regulatory Accounts and is equal to the sum of Operating and Maintenance costs.

Forecast

2016-22: Total Opex estimated using the base-step-trend method. AusNet Services' Opex forecast has been developed by:

- using revealed 2015 expenditure to determine efficient base year costs;

- applying a rate of change to base year costs to reflect expected changes in price and output growth, and productivity;

- incorporating step changes, including one-off Opex costs and marketing activities;

- understanding stakeholder attitudes and expectations on Opex; and

- forecasting debt raising costs on a category-specific basis.

Table 23.1.2: Operating expenditure (including RPM) (approved)

Preparation Methodology:

Historic

2008-12: Data sourced from the ESC Final Decision - SP AusNet GAAR 2008 Revenue Model Further Final Decision 20080513.xsls

Basis of Preparation

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Historic and Forecast

2013-17: Data sourced from the AER Final Decision - <u>SP AusNet PTRM - Final decision.xlsm</u>

23.2 Opex exc. RPM

Table 23.2.1: Operating expenditure (excluding RPM)

<u>Preparation Methodology</u>:

Historic

2008-15: Data sourced from the Annual Regulatory Accounts for each respective year and is equal to the sum of Operating and Maintenance costs.

Forecast

2016-22: Total Opex estimated using the base-step-trend method. AusNet Services' Opex forecast has been developed by:

- using revealed 2015 expenditure to determine efficient base year costs;
- applying a rate of change to base year costs to reflect expected changes in price and output growth, and productivity;
- incorporating step changes, including one-off Opex costs and marketing activities;
- understanding stakeholder attitudes and expectations on Opex; and
- forecasting debt raising costs on a category-specific basis.

Table 23.2.2: Operating expenditure (excluding RPM) (approved)

<u>Preparation Methodology</u>:

Historic & Forecast

2008-12: Data sourced from ESC Final Decision - <u>SP AusNet GAAR 2008 Revenue Model Further Final Decision 20080513.xsl</u>

2013-17: Data sourced from AER Final Decision - <u>SP AusNet PTRM - Final decision.xlsm</u>

Basis of Preparation
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23.3 Opex base-step trend

Table 23.3.1 Total Opex rate of change by item

Preparation Methodology:

Forecast

Estimated 2017 Opex

To determine a level of base year Opex that reflects efficient recurrent expenditure, a number of adjustments have been made to AusNet Services' actual 2015 Opex. These adjustments are to remove:

- movements in provisions to align with the AER's treatment of provisions; and

- debt raising costs to align with the AER's 'PTRM benchmark' approach.

Real price growth

AusNet Services' forecasting method for each of these components is summarised below.

Price component	Overview of forecasting methodology
Labour (i.e. external and internal)	An average of forecast changes in the Victorian Wage Price Index for electricity, gas, water and waste services, using forecasts from consultants Deloitte Access Economics (DAE) and BIS Shrapnel.
Non-labour (e.g. materials)	AusNet Services assumes that non-labour prices will grow in line with the CPI. This approach is consistent with recent AER determinations and is considered reasonable in the current circumstances.

For the purpose of this access arrangement proposal, AusNet Services proposes to adopt an average of the forecasts provided by consultants DAE and BIS Shrapnel for both external and internal labour.

The table below shows the BIS Shrapnel forecast of real changes in Victorian WPI for the EGWWS industry and the same forecasts prepared by DAE as (part of the AER's Draft Decision for AusNet Services' Transmission Revenue Reset).

Basis of Preparation

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Labour cost escalation rate (EGWWS)	2018	2019	2020	2021	2022
BIS Shrapnel (June 2016)	1.11%	0.94%	1.16%	1.66%	1.98%
Deloitte Access Economics (Feb 2016)	0.50%	0.90%	1.10%	1.10%	1.10%
Proposed real labour cost escalation rate (average)	0.80%	0.92%	1.13%	1.38%	1.54%

Output growth

AusNet Services has adopted an output growth rate using the same methodology accepted for the current access arrangement. This approach uses a composite growth rate of gas throughput and customer numbers.

AusNet Services engaged CIE to develop an independent view of forecasts for customer growth and gas throughput in AusNet Services' network for the forthcoming access arrangement period.

Table 23.3.2 Step changes

Preparation Methodology:

Forecast

AusNet Services has forecast two step changes for the next access arrangement period, which are summarised in the table below.

Step change	Description	Estimation method
Marketing (network development)	Marketing initiative to improve asset utilisation and reduce average network prices.	Based on analysis undertaken by Axiom Economics.
Ring-main pigging	Pipeline inspection through intelligent pigging enables detection of pipe wall loss, gouge or pitting.	Based on estimates of internal and external labour and materials.

Basis of Preparation
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Table 23.3.3 Category Specific forecasts

Preparation Methodology:

Forecast

AusNet Services has forecast its debt raising costs for this access arrangement period using the AER's current PTRM benchmark approach.

23.4 Opex incentive mechanism

Table 23.4.1 - The carryover amounts that arise from applying the Incentive Mechanism during the 2018 to 2022 regulatory control period

Preparation Methodology:

Historic

Data sourced from the Annual Regulatory Accounts.

2011-12: Data sourced from ESC Final Decision - SP AusNet GAAR 2008 Revenue Model Further Final Decision 20080513.xlsm

2013-16: Data sourced from AER Final Decision - SP AusNet PTRM - Final decision.xlsm

24   Cost category matrix

Table 24.1 – Capex

Preparation Methodology:

Historic
2013-15: Data for Internal labour, Contractor expenditure and Other expenditure was extracted from the Annual Regulatory Accounts.

2018-12: Data sourced from the Annual Regulatory Accounts. Data source does not split Labour between Internal and Contractor.

Internal labour and contractor expenditure were derived by apportioning the amounts reported as total labour costs in those years Annual Regulatory Accounts, using the average proportions each of these categories accounted for from 2013-15. For example, internal labour accounted for, on average, 3% of total capitalised labour costs from 2013-15. This percentage was applied to total capitalised labour costs from 2008-12 to derive internal labour costs for this period.

Basis of Preparation
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Forecast

2017-22: Data reflects the forecast for each of these categories in the Capex Model. As the Capex Model does not forecast 2016 by these categories, this data was derived by multiplying total forecast 2016 Capex by each category's proportion of forecast 2017-22 Capex.

Table 24.2 – Opex

<u>Preparation Methodology</u>:

Historic

2013-15: Data sourced from the Annual Regulatory Accounts, where Capex is reported in these categories.

2008-12: Data sourced from the Annual Regulatory Accounts, using the average proportions each of these categories accounted for from 2013-15. For example, internal labour accounted for, on average, 35% of total expensed labour costs from 2013-15. This percentage was applied to total expensed labour costs from 2008-12 to derive internal labour costs for this period.

Forecast

2016-22: Internal labour, contractor expenditure and other expenditure were derived by multiplying total forecast Opex by each category's proportion of total Opex in 2015, as reported in the Annual Regulatory Accounts.

25   Ancillary Reference Services (ARS)

Table 25.1 – Volume and Table 25.2 - Revenue

<u>Preparation Methodology</u>:

Historic

2008-15: Data sourced from the Annual Regulatory Accounts. Revenue reported in Table 25.2 in 2016 is in nominal terms, not real terms.

Forecast

The forecast annual volume of ancillary reference services was derived from the actual average annual volumes over the period 2012 to 2015. Special meter reading volumes have been forecast based on the actual average annual volume over the period 2012 to 2015 growing at the forecast rate of customer number growth.
Revenue has been forecast by multiplying forecast volumes for each ancillary reference service by a forecast price for each service.

Basis of Preparation

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Table 25.3 Price

Preparation Methodology:

Data reported is linked to Table 25.1 and Table 25.2.

26   Allocation of Total Revenue

Table 26 – Allocation of Total Revenue

Preparation Methodology:

Actual revenue attributed to Haulage Reference Services, Ancillary Reference Services, and Other Non-Reference Services reconcile to the Annual Regulatory Accounts, ultimately sourced from the Financial Systems.

The approach to calculating the Standalone and Avoidable cost per unit of reference service is described in AusNet Services' 2018-22 GAAR Proposal, Chapter 15 – Reference Tariffs.

Estimated Information

The revenue forecasts for Haulage Reference Services contained in Table 26.1 are based on expected volume and unit prices by tariff class.

More specifically,

- The 2016 forecast is based on forecast volumes and approved 2016 unit prices and standing charges by tariff class.

- The 2017-22 forecasts are based on forecast volumes and approved 2017 unit prices and standing charges by tariff class. These forecasts reflect those contained in AusNet Services' Revenue Proposal PTRM model.

Underlying forecast volume data is taken from CIE's forecasting model. The forecasting methodology is described in AusNet Services' Access Arrangement Information.

The Ancillary Reference Service revenue forecasts in Table 26.2 have been forecast by multiplying forecast volumes for each service by an actual / forecast unit price.

More specifically,

- The 2016 ARS forecast is based on forecast volume and 2016 actual unit prices for each service.

- The 2017-22 ARS forecasts are based on forecast volumes and forecast unit prices for each service. These forecasts reflect those contained in AusNet Services' Revenue Proposal PTRM model.

Basis of Preparation

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Forecast

Estimated/forecast volumes for ARS are derived by using a 4 year historical average.

The 2016-22 forecasts contained in Table 26.4 for Other Non-Reference Services revenue are based on historical average revenue over the 2013-2015 period.

27   Customer Numbers

Table 27.1 - Table 27.5 - Tariff Customer Numbers

Preparation Methodology:

Historic

For Tariff V, actual customer numbers and gross customer disconnections are derived from AusNet Services' service order management system, PowerOn Gas, which contains MIRN counts by postcode. Disconnections are derived from this data by determining which MIRNs existed in one year, but did not exist in the next year.

Gross connections are calculated on the following basis, for any given year:

> {Customer numbers as at 31 December *less* Customer numbers as at 1 January *plus* Gross customer disconnections}

For Tariff D & M, actual customer numbers and gross customer disconnections are derived from AusNet Services' billing system, Kinetiq, which contains MIRN counts by postcode. Disconnections are derived from this data by determining which MIRNs existed in one year, but did not exist in the next year.

Gross connections are calculated on the following basis, for any given year:

> {Customer numbers as at 31 December *less* Customer numbers as at 1 January *plus* Gross customer disconnections}

Forecast

For Tariff V, gross customer connections are calculated on the following basis, for any given year, t:

> {Number of customers from CIE's forecast in year t *Less* Number of customers from CIE's forecast in year t-1 *Plus* Number of disconnections forecast for year t}

The number of disconnections in year t has been derived by allocating the total number of disconnections in CIE's forecast model to each of the pricing zones, by using a pro-rata method using the last three years of actual data.

The number of customers as at 1 January is a pre-calculated field in the RIN. The number of customers as at December is calculated on the following basis, for any given year:

Basis of Preparation

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{Customer numbers as at 1 January *plus* Gross customer connections *less* Gross customer disconnections}

The forecasting methodology is described in AusNet Services' access arrangement information.

AusNet Services' forecast model differs from the RIN in that the forecast model uses the average customer numbers reported in the Annual Regulatory Accounts as its starting point and projects increases in customer numbers using the most recent full year of available data (2015).

This approach necessarily entails a small reconciling difference between the forecast model and the RIN templates in terms of average customer numbers. This is because, for pricing purposes, the average number of customers in a year does not equal the RIN definition of average customers, i.e. {(Customers at 1 Jan + Customers at 31 Dec)} / 2}.

The reason for this is due to the impact of disconnections during the year and can be explained by reference to the following example.

Suppose that:

- At 1 January 2016, AusNet Services has six customers
- On 1 February, all of these customers disconnected
- Between February and November, no customers connected to AusNet Services' network
- On 1 December, six new customers connected.

The above scenario would result in an average customer base of 6 in 2016, according to the definition of the RIN. However, for pricing purposes, AusNet Services only had 6 customers in January and 6 in December. Therefore, the average number of customers in 2016 who actually contributed to revenue was $\{(6 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 6)/12\} = 1$ customer on average over the year.[2]

Whilst this is an extreme example, it demonstrates why the RIN definition of average customers will not necessarily reconcile to the regulatory accounts definition of average customers, as disconnections throughout the year tend to result in the true average being lower than the arithmetic average using a starting and ending date. It is appropriate that the forecast model uses the average number for pricing purposes, as this is the number that will contribute to revenue.

At a total level, the difference this makes is insignificant. The RIN calculation method results in average customer numbers being 0.3% higher than the CIE forecast model by 2022 (around 2,500 customers on a customer base of ~750,000 customers).

A forecast of Tariff D customer numbers is not required for AusNet Services' proposed prices for the 2018-2022 period, due to the pricing structures in place (which don't levy a fixed charge) and the forecasting methodology which links forecast MHQ to AEMO's Tariff D forecasts.

In order to forecast customer numbers for the RIN, it is assumed that the current 2016 customer numbers remain unchanged for the rest of the year. Then the forecast customers are based on the trend observed in the 2011-16 period.

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[2] This calculation is the equivalent of {(No. customers in January + No. customers in February + … + No. customers in December) / 12}

Basis of Preparation

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28   Consumption and Demand

Table 28.1 - Consumption and demand

Preparation Methodology:

Actual

For Tariff V, actual consumption is sourced from historical Annual Regulatory Accounts.

For Tariff D &M, actual data is sourced from AusNet Services' billing system, Kinetiq.

Forecast

Forecast data is taken from CIE's forecasting model.   The forecasting methodology is described in Chapter 4 of AusNet Services' Access Arrangement Information.

29.1   Gas extensions ($)

Table 29.1 - Gas Extensions - Financial Information

29.1.1 to 29.1.4 Gas extensions

Preparation Methodology:

There are four gas extensions in AusNet Services' network: Winchelsea, Bannockburn, Avoca and Huntly. In accordance with the RIN instructions, there are four copies of Template 29.1.

Table 29.1.1 Revenue Information

Forecast

Templates 29.3.1 to 29.3.4 contain forecasts of Consumption (demand) and Fixed customer tariff numbers for Residential and Business tariff customers. Forecast revenue was calculated by multiplying the annual tariffs from Template 29.4 for Residential and Business customers by the forecast consumption (and customer numbers) from Templates 29.3.1 to 29.3.4.

The annual tariffs applied to the forecast were 'Adjoining West' for Huntly & Avoca, and 'Adjoining Central' for Bannockburn & Winchelsea.

Estimated

Winchelsea, Bannockburn, and Avoca have no revenue prior to 2017 and therefore all revenue is forecast.

Huntly (Table 29.1.14) has revenue in 2014 and 2015. The revenue in these years was estimated by multiplying the 2016 Adjoining West tariffs for Residential and Business customers by the calculated consumption (and customer numbers) from Template 29.3.4.

Basis of Preparation

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Table 29.1.2 Operations and Maintenance Cost

Preparation Methodology:

Forecast

Winchelsea, Bannockburn, and Avoca have no O&M prior to 2017 and therefore all O&M is forecast.

The forecast is derived from multiplying the forecast customer numbers from Tables 29.2.1 to 29.2.4 with an estimated operating cost per customer.

The estimated operating cost is $45 per customer per year. This estimate was sourced from AusNet Services' business cases for gas network extensions.

Estimated

Huntly had gas customers connected from 2014. The estimated Opex for 2014 & 2015 was calculated by multiplying the customer numbers for 2015 & 2015 from Template 29.2.4 with an estimated operating cost per customer.

The estimated operating cost is $45 per customer per year. This estimate was sourced from AusNet Services' business cases for gas network extensions.

Table 29.1.3 Capital expenditure

Preparation Methodology:

Historic

Government contributions to gas extensions for 2013 to 2015 were extracted from the Annual Regulatory Accounts input data.

Capital expenditure for Gas Extensions – Energy for the Regions is reported in the Annual Regulatory Accounts. Actual capital expenditure for each new town extension was sourced from the Annual Regulatory Accounts input data. (This capital expenditure excludes customer connections Capex.)

Estimated

The total expenditure for each year was allocated into asset categories (HP mains and TRS & DRS – valves & regulators) in proportion to the forecast split of expenditure in each project business case.

Only Huntly had customers connected during the period 2013 to 2015. Expenditure on HP services and Contract meters for Huntly was estimated based on the customer numbers in Template 29.3.4. The cost of a meter is estimated to be $165 per customer and the cost of an HP service is estimated to be $914 per customer. These cost estimates were derived from an assumption in the Bannockburn gas extension business case.

Basis of Preparation

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Forecast

Forecast expenditure on HP services and Contract meters for each gas extension was estimated based on the customer numbers in Templates 29.3.1 to 29.3.4. The cost of a meter is estimated to be $165 per customer and the cost of an HP service is estimated to be $914 per customer. These cost forecasts were derived from an assumption in the Bannockburn gas extension business case.

29.2   Gas extensions - Customer Numbers

Table 29.2.1-29.2.4 Gas extensions - Customer Numbers

Preparation Methodology:

There are four gas extensions in AusNet Services' network: Winchelsea, Bannockburn, Avoca and Huntly. In accordance with the RIN instructions, there are four copies of Template 29.2.

Historic & Forecast

Winchelsea, Bannockburn, Avoca

Forecast customer numbers for 2016-2022 are taken directly from CIE's forecast model. The forecasting methodology is described in AusNet Services' access arrangement information. It is assumed that there are no disconnections in these towns for forecasting purposes.

For the years beyond 2022, in each year, the gap between current customers and the expected final number of customers in each town is reduced by 25%.[3] This methodology has been adopted from CIE's approach to the Huntly extension in the 2013-17 GAAR, which the AER accepted.

Huntly

Historic

Actual customer numbers are sourced from AusNet Services' metering system, Hansen, based on the suburb name against each MIRN.

Forecast

Forecast numbers are based on reducing the gap between current customers and the expected final number of customers by 25% each year, as with the other Energy for the Regions towns.

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[3]   As included on the AusNet Services website: http://ausnetservices.com.au/Gas/Our+Projects/Energy+for+the+Regions.html

Basis of Preparation

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29.3   Gas extensions - Demand

Table 29.3.1-29.3.4 Gas extensions - Demand

Preparation Methodology:

There are four gas extensions in AusNet Services' network: Winchelsea, Bannockburn, Avoca and Huntly. In accordance with the RIN instructions, there are four copies of Template 29.3.

Historic & Forecast

Winchelsea, Bannockburn, Avoca

Demand for new towns is calculated on the basis of the average demand in each block (consumption per customer) for the relevant pricing zone, which is then multiplied by the customer forecast for each gas extension. For all years beyond 2022, the average 2022 consumption has been used to forecast demand.

Huntly

Historic

Actual consumption for Huntly was derived from AusNet Services' billing system, Kinetiq.

Forecast

Forecast demand is calculated on the basis of the average demand in each block (consumption per customer) for the adjoining west pricing zone, which is then multiplied by the customer forecast for each gas extension. For all years beyond 2022, the average 2022 consumption has been used to forecast demand.

29.4   Gas extensions - Tariffs

Table 29.4.1 - Table 29.4.3

Preparation Methodology:

Gas extensions are covered by Tariff V adjoining central and west for residential and non-residential tariffs.

In Tables 29.4.1 and 29.4.2 the historical approved tariffs (standing charges and block components) are provided together with 2017 approved tariffs and forecast tariffs as contained in AusNet Services' Proposal PTRM.

These tariffs apply to all four gas extensions provided in related Templates 29.1, 29.2 and 29.3.

AusNet Services does not apply any Contract tariffs for its regulated gas network.

Basis of Preparation

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Estimated Information:

The forecast annual tariffs from 2023 onwards are based on 2022 tariffs with annual inflation applied.

30	Network Characteristics

Table 30.1 – Network Length by Pressure

Preparation Methodology

Data is in the unit of kilometres.

Table 30.1.1 – Low Pressure

Previous access arrangement period 2008-2012: Data was taken from the previous RIN template for 'access arrangement period 2013 to 2017'. For polyethylene, assumed that there was no HDPE (250) because there was none in the actual data used for 2014–2016. To separate polyethylene into HDPE (575) and MDPE, the ratio of HDPE (575) and MDPE in actual data for 2015 and 2016 of 98% HDPE (575) to 2% MDPE was used.

Current access arrangement period 2013-2014: Data was taken from AusNet Services' Geospatial Information System (GIS) in December of the years 2013-2014. Polyethylene was split using the same ratio methodology assumption as for 2008-2012 (i.e. 98%:2% split). Unprotected steel is assumed to be any steel pipe without a coating. Protected steel is assumed to be any steel pipe with a coating.

Current access arrangement period 2015: Data was taken from an extract of GIS on 2 December 2015. No assumptions were made for polyethylene split into HDPE (575) and MDPE, the length given is the actual length.

Current access arrangement period 2016: Data has been based on an extract of GIS on 2 November 2016. No assumptions were made for polyethylene split into HDPE (575) and MDPE. November data was then prorated to the end of 2016 based on the expected length of low pressure mains still to be removed from the network as part of the low pressure mains replacement program. This was then shared across the entire low pressure length based on the proportion of each material type within the network.

Current access arrangement period 2017 and Next access arrangement period 2018-2022: Length of low pressure has been based on length forecast to be removed as part of the low pressure mains replacement program each calendar year. This was then shared across the entire low pressure asset base based on the proportion of each material in the network as of 2016.

Table 30.1.2 – Medium Pressure

Previous access arrangement period 2008-2012: Data was taken from the previous RIN template for 'access arrangement period 2013 to 2017'. For polyethylene, assumed that there was no MDPE because there was none in the actual data used for 2014 – 2016. To separate polyethylene into HDPE (250) and HDPE (575), the ratio of HDPE (250) and HDPE (575) in actual data for 2015 and 2016 of 16% HDPE (250) to 84% HDPE (575) was used.

Basis of Preparation

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Current access arrangement period 2013-2014: Data was taken from AusNet Services' Geospatial Information System (GIS) in December of the years 2013-2014. Polyethylene was split using the same ratio methodology assumption as for 2008-2012 (i.e. 16%:84% split). Unprotected steel is assumed to be any steel pipe without a coating. Protected steel is assumed to be any steel pipe with a coating.

Current access arrangement period 2015: Data was taken from an extract of GIS on 2nd December 2015. No assumptions were made for polyethylene split into HDPE (250) and HDPE (575), the length given is the actual length.

Current access arrangement period 2016: Data has been based on an extract of GIS on 2nd November 2016. No assumptions were made for polyethylene split into HDPE (250) and HDPE (575). November data was then prorated to the end of 2016 based on the expected length of medium pressure mains still to be removed from the network as part of the medium pressure mains replacement program. This was then shared across the entire medium pressure length based on the proportion of each material type within the network.

Current access arrangement period 2017 and Next access arrangement period 2018-2022: Length of medium pressure has been based on length forecast to be removed as part of the medium pressure mains replacement program each calendar year (block renewals only). This was then shared across the entire medium pressure asset base based on the proportion of each material in the network as of 2016.

Table 30.1.3 – High Pressure

Previous access arrangement period 2008-2012: Data was taken from the previous RIN template for 'access arrangement period 2013 to 2017'. For polyethylene, it was assumed that there was no HDPE (250) because there was none in the actual data used for 2014 – 2016. To separate polyethylene into HDPE (575) and MDPE, the ratio of HDPE (575) and MDPE in actual data for 2015 and 2016 of 99% HDPE (575) to 1% MDPE was used.

Current access arrangement period 2013-2014: Data was taken from AusNet Services' Geospatial Information System (GIS) in December of the years 2013-2014.

Polyethylene was split using the same ratio methodology assumption as for 2008-2012 (i.e. 99%:1% split). Protected steel is assumed to be any steel pipe with a coating.

Current access arrangement period 2015: Data was taken from an extract of GIS on 2nd December 2015.From 2015 onwards, length data includes the High2 pressure tier. No assumptions were made for polyethylene split into HDPE (575) and MDPE, the length given is the actual length.

Current access arrangement period 2016: Data has been based on an extract of GIS on 2nd November 2016. No assumptions were made for polyethylene split into HDPE (575) and MDPE.

Current access arrangement period 2017 and Next access arrangement period 2018-2022: Length of high pressure has been based on an assumption of 2% p.a. growth, as well as the forecast length of be upgraded to high pressure as a result of the low and medium pressure mains replacement programs each calendar year.

Basis of Preparation
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Table 30.1.4 – Transmission Pressure

Previous access arrangement period 2008-2012: Data was taken from the previous RIN template for 'access arrangement period 2013 to 2017'.

Current access arrangement period 2013-2017 and Next access arrangement period 2018-2022: Data was taken from GIS and assumed that there are no material changes to the transmission network length.

Table 30.2 –City Gates/Regulators

Previous access arrangement period 2008-2012: Data was taken from the previous RIN template for 'access arrangement period 2013 to 2017'.

Current access arrangement period 2013-2014: Data was taken from historical trends.

Current access arrangement period 2015-2016: Data was taken from SAP.

Current access arrangement period 2017 and Next access arrangement period 2017-2018: Assume four city gates are commissioned (two due to capacity requirements and two due to New Regional Towns connections). Assume an average of 6 District Regulators are decommissioned per annum based on historical trends.

Table 30.3 – Unaccounted for Gas – transmission and distribution

Methodology assumed that UAFG matches the benchmark in 2016 and 2017. For 2018 and beyond, the 2017 benchmark was adopted.

Table 30.4 - Network Length by suburb/post code

2008-2013: Required data not available.

2014-15: Data sourced from GIS and built up by length and postcode.

2016-22: The forecast length is based on the percentage material composition of 2015 actual data. For those suburbs within growth areas, a growth rate of 2% was applied. For those suburbs forecast to undergo low and medium mains replacement, this was taken into account across the entire material base.

Table 30.5 - Leaks (publicly reported or identified by AST) by cause of leak by suburb/post code and average forecast leak rate for each asset type by suburb/post code

The 2013 and 2014 data is from Q4 (Asset Management database prior to SAP). The only AER breakage categories considered were:

- Broken Pipe – Cracked

- Joint Leak

- 3rd Party Damage

- Identified water in main.

The other categories were excluded due to the below reasons:

- Cannot differentiate between a crack and full break in AusNet Services' data so only 'crack' was used.

- Cannot have 'corrosion' and 'broken pipe' as two separate causes, one can be a direct cause of the other. Hence 'corrosion' was discounted.

There is no data for 2015.

The 2016 data is up to end of October 2016 but cannot be categorised into breakage type. It was reported at the material level only.

The estimated number of leaks per kilometre was the average number of leaks divided by the total length of each material in the postcode, not broken down into the different pressure tiers.

The estimated number of crack related leaks per kilometre is the average number of leaks in the 'Broken pipe – cracked' category divided by the total length of the relevant material in the postcode.

31 Pass Throughs

Table 31.1: Pass through event costs (actual)

Preparation Methodology:

Historic & Forecast

The data reported is based on AusNet Services proposed cost pass through application for low pressure mains replacement program submitted to the AER on 11 August 2016: AusNet Services Cost Pass Through Application 11082016.

Table 31.2: Pass through event costs (approved)

Preparation Methodology:

Historic & Forecast

The data reported is based on AER Final Decision for cost pass through application for low pressure mains replacement program provided 14 September 2016: AusNet Services gas mains replacement cost pass through AER decision September 2016.